

Claims

1. Openable motor vehicle roof (10) with a movable roof element (16) for selectively closing and at least partially clearing a roof opening (22), a body-mounted frame component (34) which extends over at least one edge area of the roof opening, a seal element (36) which is located in the area of the frame component, and against which the roof element rests when the roof opening is being closed, an electric motor drive for moving the roof element and a monitoring means which is coupled to the drive, which evaluates the drive parameters derived from the drive and turns off and optionally reverses the drive, when it is recognized using the evaluation of the drive parameters that there is a interfering body (38) between the roof element and the edge area of the roof opening, characterized in that on the roof element (16) there is a stop surface (40) for detecting an interfering body (38), the motor vehicle roof (10) being made such that if there is a interfering body between the edge area of the roof opening (22) and the roof element when the roof opening is being closed, the stop surface comes into contact with the interfering body before the roof element engages the seal element (36).
2. Openable motor vehicle roof as claimed in claim 1, in which the motion of the roof element (16) when the roof opening (22) is being closed has a component perpendicular to the roof surface.
3. Openable motor vehicle roof as claimed in claim 2, in which the roof element (16) rests from obliquely overhead against the seal element (36) when the roof opening (22) is being closed.
4. Openable motor vehicle roof as claimed in one of the preceding claims, in which there is a roof opening (22) in the fixed roof surface and the roof element (16) is pushed above the fixed roof surface (18) to clear the roof opening.

5. Openable motor vehicle roof as claimed in one of the preceding claims, in which the stop surface (40) in the direction of the closing motion of the roof element (16) projects above the roof element.

6. Openable motor vehicle roof as claimed in one of the preceding claims, in which the stop surface (40) is made especially as an edge which projects in the area of the front edge (30) of the roof element (16).

7. Openable motor vehicle roof as claimed in claim 6, in which the stop surface (40) is made as an extension of the front edge (30) of the roof element (16) in the direction of the closing motion of the roof element.

8. Openable motor vehicle roof as claimed in claim 6 or 7, in which in the closed position of the roof element (16) the seal element (36) in the lengthwise direction of the motor vehicle lies behind the stop surface (40).

9. Openable motor vehicle roof as claimed in one of the preceding claims, in which the stop surface (40) extends essentially over the entire width of the roof opening (22).

10. Openable motor vehicle roof as claimed in one of claims 5 to 9, in which the stop surface (40) is foamed onto the roof element (16).

11. Openable motor vehicle roof as claimed in claim 10, in which the roof element (16) has peripheral edge foaming into which the stop surface (16) is integrated.

12. Openable motor vehicle roof as claimed in one of the preceding claims, which is designed to detect interfering bodies (38) up to a thickness of up to 4 mm measured in the closing direction of the roof element (16).

13. Openable motor vehicle roof as claimed in one of the preceding claims, in which the monitoring means is designed to detect the current consumed by the electric motor drive, the torque delivered by the drive, the number and direction of revolutions of the driven shaft of the drive, the rpm of the drive and/or the positioning speed of the roof element (16).